THE VETERINARY RECORD

FOUNDED BY WILLIAM HUNTING, F.R.C.V.S., 1888.

No. 20. MAY 15, 1948 VOL. 55

ANNUAL REVIEW

Advances in Veterinary Medicine

(*Continued from page* 203)

Tuberculin and the Tuberculin Testing of Cattle

A committee of the Australian Veterinary Association considered (Report, 1939) the various methods of tuberculin testing. Following this report large-scale field trials and *post-mortem* examinations were carried out. These trials are of particular interest because U.S.A. Bureau of Animal Industry and very similar Australian tuberculins were used. Bazely and Barraclough autopsied positive reactors only, but Legg and Maunder autopsied all animals tested. In assessing the significance of these results it should be remembered that the autopsy consisted only of a careful examination in the slaughter-house and, as the authors admit, some tuberculous animals must have been missed and some lesions may have been wrongly classed as tuberculous.

The single intradermal test, using the caudal fold and a dose of 0·05 c.c., was used for all the work summarised in Table II. Legg and Maunder (1940b) also carried out a trial on 271 animals, using two synthetic medium tuberculins and an old tuberculin of the type previously used for the double intradermal test. The two former were given as a single injection in the right and left caudal fold and the latter as a double injection in the neck. On *post-mortem* examination 32 animals proved to be tuberculous. Of these 84 per cent. gave positive reactions to the double intradermal test and to one of the synthetic tuberculins, and 90 per cent. reacted to the other synthetic tuberculin. It was concluded that the single intracaudal test, using potent synthetic tuberculin and reading at the 72nd and 96th hours, is as accurate as the double intradermal test using old tuberculin.

TABLE II

Author	Number tested	Presence (+) or absence (—) of lesions at P.M. examination	Result of tuberculin test: Positive	Doubtful	Negative
Bazely and Barraclough (1940)	*2,934	P.M. on 196 reactors: 177 +	177	—	—
		19 —	19	—	—
Legg and Maunder (1940b)	453	60 +	50	6	4
		393 —	3	7	383
Legg and Maunder (1940a)	594	63 +: Advanced 13	9	1	3
		Moderate 33	28	5	0
		Slight 17	6	1	10
		531 —	3	2	526
Legg and Maunder (1941a)	458	42 +: Advanced 10	4	1	5
		Moderate 16	16	0	0
		Slight 16	14	0	2
		416 —	3	0	413
Summary of Legg and Maunder's results	1,505	165 + (10·9% of tested)	127	15	23
		1,340 —	9	9	1,322

* Unlike Legg and Maunder, Bazely and Barraclough only carried out *post-mortem* examinations on positive reactors. In actual fact, 1,595 animals were tested by them, but each one was tested with two of nine different tuberculins. The results with C.S.L. H8 are excluded as this tuberculin was not considered satisfactory; the other results are given as though each test was on a different animal.

Of the 1,505 culled dairy cows examined by Legg and Maunder (Table II), 165 (10·9 per cent.) were found to have macroscopically detectable tuberculous lesions—considering the type of cattle a low incidence. Twenty-three of these tuberculous animals (14 per cent.) failed to react and 15 (9 per cent.) gave doubtful reactions. Only nine (0·67 per cent.) of the 13,400 negative animals gave positive reactions and the same number were doubtful. It will be seen that the test failed to detect a large percentage of infected animals and in this series it would obviously have been advantageous to regard all doubtful reactions as positive. The importance of the doubtful reactor is emphasised by Legg and Maunder (1941b) in summarising the results of the test in 42 animals shown to be suffering from advanced tuberculosis. Twelve gave definite positive reactions, 19 border-line positive reactions, which might easily have been interpreted as doubtful, and eleven animals (over 25 per cent.) did not react.

Hendershott & Johnston (1941) studied the problem of detecting these animals and found that following the subcutaneous inoculation of tuberculin there was little or no change in the neutrophile : lymphocyte ratio in normal cattle, but that within 15 hours in the tuberculous animals it changed from 1 : 1·5 to 1 : 0·5. Forty-four of 46 animals which reacted to this test revealed gross lesions of tuberculosis. Of these, 26 gave a thermal reaction but only 11 reacted to the intracaudal test. Bull (1941) found that the complement fixation test was useful for detecting advanced cases of tuberculosis.

The potency of the tuberculin employed in this country was compared with B.A.I. tuberculin by Montgomerie and Thomson (1938). They found that when tested in guinea-pigs the potency of B.A.I. tuberculin was approximately one-half, and the various batches of the British tuberculin one-quarter of the International Standard. Using the double intradermal test they compared the value of these tuberculins for detecting tuberculous cattle and concluded that the British tuberculin was insufficiently potent and that much further work was required to determine the optimum potency of tuberculin for field use.

It must be pointed out, however, that the total dose of tuberculin used in the double intradermal test is 0·2 c.c. whereas the dose of B.A.I. tuberculin recommended for use in the single intracaudal test is only 0·05 c.c. It would appear, therefore, that the double intradermal test using the British tuberculin was approximately as effective as the single intracaudal test using B.A.I. tuberculin and indeed no published evidence suggests that the British test ever missed as many heavily infected cows as were missed in the Australian trials (Table II).*

A tuberculin very similar to the B.A.I. tuberculin has now been employed for the double intradermal test in this country.† It has been officially stated (*Vet. Rec.* **54.** 191-192) that the tuberculin formerly in use was unsatisfactory as a diagnostic agent for bovine tuberculosis but that Weybridge tuberculin has been used in too high a dose and for this reason has given an excessive number of positive reactions in cattle showing no evidence of infection with bovine tuberculosis. The problem of the no-lesion reactor has long been recognised and much work has been carried out to discover the cause of the sensitisation responsible for these reactors.

It is known that nodular lesions in the skin of cattle, in which acid-fast bacilli of undetermined type may be found, sensitise animals to tuberculin (Hole and Hulse, 1939); Glover (1941) has referred to previous work on the infection of cattle with avian tubercle bacilli and reported that of 35 unselected cattle examined, five were certainly, and five more probably, infected with avian tuberculosis. Feldman and Moses (1941) examined 101 animals which before slaughter had reacted to avian or mammalian tuberculin. Lesions considered to be tuberculous were found in 44 carcases but bacilli, all of the bovine type, were isolated from only 23. Skin lesions were found in 17 animals and in 40 (39·6 per cent.) no reason for the sensitisation could be discovered. The importance of the no-lesion reactor in America has been emphasised by Hagan (1942). During 1940-41 no lesions of tuberculosis were found in 41 per cent. of the cattle slaughtered in the U.S.A. because of a positive tuberculin reaction; this is not quite as serious as it sounds as it only represents 0·14 per cent. of all the cattle tested, but it is a problem calling for immediate investigation. It may be that as well as the organisms already mentioned various saprophytic acid-fast bacilli cause tuberculin sensitivity, but there is little evidence that in any of the investigations so far reported a sufficiently searching *post-mortem* examination has been carried out, and until this has been done it is difficult to draw conclusions. Hagan concludes that very great efforts will be required to finish the task of eradicating bovine tuberculosis from the U.S.A.

The existence of non-specifically sensitised animals and animals with low skin sensitivity but suffering from advanced tuberculosis makes the selection of an optimum dose of tuberculin extremely difficult, and it is obvious that no dose can detect all infected animals without causing some false positive reactions. It should also be noted that because of the varying incidence of tuberculosis and non-specific sensitisation, what may be a suitable tuberculin for one country will not necessarily be suitable for another.

Montgomerie and Thomson (1939) were the first to use purified protein derivative (P.P.D.) for the testing of cattle in this country and found that it compared favourably with other tuberculins. They pointed out that the specificity of the various tuberculins could be more accurately determined if they were prepared as P.P.D. Green, Eden and Reid (1942), using sensitised guinea-pigs as test animals, showed that there was an easily detectable difference between P.P.D.s prepared from mammalian tubercle bacilli and those prepared from avian tubercle bacilli or Johne's bacilli. It follows that cattle infected with bovine tuberculosis can be distinguished from those infected with avian bacilli or *M. johnei* by comparing their reaction to mammalian and avian P.P.D. injected simultaneously.

* NOTE.—*Doyle* (1943, *Vet. J.*, 99, 64) injected 0·1 c.c. amounts of tuberculin into the skin of the neck of 25 animals affected with advanced tuberculosis, 24 gave positive reactions.

† P.P.D. tuberculin is now being issued.

It is significant that a number of practitioners (discussion on paper by Ritchie, 1942) have expressed the view that the recently introduced comparative test is the only one on which reliance can be placed.

It may be felt that this account is more a statement of difficulties than a description of recent advances, but despite this, fundamental advances in our knowledge of tuberculin and tuberculin sensitivity have been made and controlled field trials begun. As a result of these trials it may be possible to introduce a P.P.D. tuberculin of such strength that only one injection need be given; reducing the labour and thus increasing the amount of tuberculin testing that can be carried out (Ritchie, 1942). It must not be expected, however, that the introduction of P.P.D. tuberculin will solve all, or even most, of the problems of tuberculin testing. The chief difficulties of the test are that skin sensitivity to an infection with the bovine type of bacillus may vary within very wide limits, and other acid-fast bacilli will produce sensitisation, sometimes of a high order, to mammalian tuberculin. It is obvious that these difficulties cannot be *eliminated* by improving the tuberculin. In many areas the incidence of avian and other non-specific sensitisation may prove to be so high that a mammalian tuberculin of sufficient potency to detect all bovine infections will give many false positive reactions; the comparative test will then have to be retained. Perhaps the present status of the tuberculin test can best be described by quoting words used by Bang in 1891, only one year after the discovery of tuberculin. "It is found that the tuberculin test is no more perfect than are other things in this world. Sometimes it fails. Animals with a very real degree of tuberculosis will sometimes fail to react, and the same applies to animals with a very slight degree of the disease. Further, a positive reaction has been observed several times in animals in which no tuberculous changes were found on examination of the organs when the animals were slaughtered . . . but it would be the greatest folly to reject this method because it is not able to give everything we desire."

Immunisation

The vast literature dealing with the value of B.C.G. (an attenuated bovine strain of the tubercle bacillus) as an immunising agent against tuberculosis in animals and man cannot be reviewed here. Dalling (1942) said, "The results of recent field experiments seem to be sufficiently encouraging to merit an extensive field trial in suitable herds. . . . Much information now lacking would be obtained from such a trial."

Some years ago Elton—of the Bureau of Animal Population, Oxford—was interested in an epidemic disease of wild voles. On investigation it was found that the disease was due to an organism now known as the vole acid-fast bacillus. It was soon found that this organism differed from the human, bovine or avian types of *M. tuberculosis*. Even large doses produced only slight regressive lesions in guinea-pigs and calves. Wells and Brooke (1940) vaccinated groups of guinea-pigs with B.C.G. and with the vole acid-fast bacillus; subsequent tests with virulent human and bovine tubercle bacilli indicated that the vole bacillus produced a much better immunity than B.C.G. Griffith and Dalling (1940) performed experiments in guinea-pigs and calves. Nine calves were vaccinated with the vole bacillus and there were two controls. Immunity was tested 71 to 175 days following vaccination. The two controls developed a moderate infection, five of the vaccinated had trivial lesions, and in four there were no macroscopic lesions. The authors say that the results were unexpectedly good, being better than would be expected with B.C.G. vaccine. Further experiments are now being carried out at Cambridge.

The Control of Tuberculosis in Great Britain

The incidence of bovine tuberculosis is usually given as 40 per cent., but Matthews (1942) pointed out that this over-all figure is misleading. There are areas where the incidence approaches 100 per cent. and other areas where it is only 2·6 per cent. He suggested that at least two types of regions could be recognised: those in which testing and eradication was possible and those in which this would be impracticable. There would be no objection to selling reacting animals from eradication areas into regions where the incidence was high. The difficulties of tuberculin testing have been discussed in a previous section, but despite the apparent defects of the U.S.A. intracaudal test, as revealed by the Australian trials, the achievements of the Bureau of Animal Industry in the control of bovine tuberculosis cannot be overlooked: there is every reason to believe that the tuberculin test is sufficiently reliable for establishing eradication areas in this country. In the non-eradication regions control measures similar to those advocated by Bang could be carried out, and after further research and field trials have been performed vaccination will probably be useful in reducing the incidence of tuberculosis. At present it has the disadvantage of producing skin sensitivity. For any scheme on these lines to be effective, it would obviously be necessary for vaccinated calves and reacting cattle to be marked to prevent confusion and waste of effort.

The foregoing account has shown that there are scientific problems to be overcome before tuberculosis of cattle can be controlled; it must not be overlooked, however, that the economic and educational problems involved are perhaps more difficult of solution. Unlike foot-and-mouth disease, tuberculosis is insidious and the damage it produces is not immediately obvious; its control requires sustained effort by all concerned. Even when the scientific means are available, *it is unlikely that bovine tuberculosis will be controlled until a sufficiently enlightened educational campaign has convinced the public, or at least the farmers, that its control is worth while.* In the early stages farmers will have to be given sufficient financial encouragement to compensate them for the trouble and expense involved. (*For references see page* 202.)

THE VETERINARY RECORD

May 15th, 1943

APPLIED VETERINARY PHYSIOLOGY

THE Veterinary Colleges were founded in order that men should be trained to combat the great epidemic diseases which, with the increase in trade, were killing an ever-increasing number of livestock. It is only comparatively recently that such diseases have come under complete or partial control, even in civilised countries.

The result has been that a far more intensive animal husbandry has been developed and this, in turn, has given rise to fresh problems that cannot be solved by the old methods of approach. Just as a basis of pathology was essential for tackling the older problems, many of the new ones require a wide knowledge of applied veterinary physiology. For the veterinarian the general principles and illustrations from medical physiology are not enough; the course in physiology should be the student's first introduction to clinical observation of the animal that he will treat. He should, for example, carefully observe cattle chewing the cud, listen to the heart beat, respiratory sounds, and the noises made by the normal movements of the rumen, and be familiar with the changes in the genitalia and udder associated with reproduction. These elementary observations are of fundamental importance, and the difficulties of providing adequate material on which they can be made by a large number of students must be overcome. A knowledge of general physiology is, of course, essential, but for the veterinarian, it is the applied physiology of farmstock which is of outstanding importance, *e.g.*, the physiology of ruminant digestion, breeding and reproduction, of egg laying and milk production, of growth, of muscle development and of meat production.

The older textbooks on veterinary physiology such as Colin (1871) and Smith (last edition 1921), contain much valuable information of an applied nature, but they are largely out of date, and Duke's has become a standard work. A review of the last edition of this book appears in this issue, together with a review of Espé's monograph on milk secretion. The latter was written to focus knowledge gained in the courses on physiology, nutrition and anatomy, on the problems of milk secretion. The author has largely succeeded in his task, and we hope that further monographs of this type on important problems of applied physiology will appear in due course.

The knowledge of the physiological and biochemical processes forming the basis of the productivity of farm livestock is still limited; there is, however, already sufficient knowledge to demand special provision in our veterinary courses. Indeed, it is clear that veterinary students need to devote more of their time to the study of physiology, particularly as applied to animal husbandry. We are glad to note from the proposed curriculum recently agreed by Council, R.C.V.S., that the Council fully appreciates the importance of applied veterinary physiology.

CLINICAL COMMUNICATIONS

Cases of Electric Shock in the Cow

I: J. ADAMSON, jun., m.r.c.v.s.
Bolton

On a recent evening I received a call to attend a cow which was said to be "having a fit." On arrival the animal in question, a second calf Shorthorn cow, was behaving in a very strange manner, bellowing loudly and attempting to climb over the front of the stall, kneeling down and getting up, occasionally throwing itself on the ground altogether. These gyrations were punctuated by quiescent periods.

A tentative diagnosis of hypomagnesaemia was made although the case did not appear to be a typical one, the usual muscular twitching being absent. It is my practice to administer chloral hydrate 1 oz. in a pint of water first and inject 5 oz. magnesium sulphate subcutaneously in the same quantity of water afterwards. It was not possible to give the drench in this case as the cow put its head between its forelegs and bellowed every time an attempt was made to drench it. The injection of magnesium sulphate was, however, completed without incident.

The owner was advised to fasten the cow up with a rope halter in preference to the chain. The fittings in the shippon were tubular iron and concrete and when an attempt was made to undo the chain, the owner received a severe electric shock.

The cow made an extremely rapid and uneventful recovery immediately the current was switched off at the main switch. The circuit involved carried a voltage of 230 and was safety fused at 10 amperes.

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II: LEIGHTON PITCHER, m.r.c.v.s.
Wooburn Green, Bucks

I should be very much helped if practitioners or others could give a definite ruling on what degree of electrical shock is necessary to kill a cow. Following are the details which prompt me to make this request.

At 6.30 a.m. on the morning of February 2nd a message came in from a very large herd owner that four cows had "dropped dead" when being driven from the cowshed to the milking bail. On arriving about 20 minutes later I found that two of these animals had recovered and were tied up in the cowshed: they seemed very quivery, tetanic and nervous; temperatures were normal. The two dead cows did not exhibit any marks or signs such as blood discharge from nostrils or anus. Because of the number of casualties and the recovery of two, anthrax was ruled out without the aid of the microscope.

Electrocution was the first suspicion, but no damaged electrical wiring could be found and so for the time being this possibility was discounted. In view of the nervous twitchings of the two recovered animals, and perhaps against my better judgment, a diagnosis of lactation tetany was made and the appropriate magnesium injections were given.

Later in the morning the manager of the dairy sent a message that the cows had been electrocuted, as one of the land girls when passing the spot where the cows had dropped had "felt a peculiar twitching down her legs" and this had led to a search which revealed a burnt out electrical cable. In the early morning it had been very dark and wet, so it was overlooked. It seemed reasonable to assume that electrocution was the cause of death.

Until two months before, this farm was supplied by electricity from its own generating plant which was of 110 volts direct current. Now the main supply has been brought in and the voltage transformed down to 110 volts alternating current. I suggested that the transformer was out of order, but was assured by the inspector that it was functioning normally. The safety fuse level of the circuit is of five amperes.

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Electric Shock in the Dog

R. C. G. HANCOCK, b.sc., m.r.c.v.s.
Beaconsfield

I received an urgent telephone message from a client asking me to come and see two corpses! Apparently her pet, a bitch on heat, confined to its run, had been wooed by a local mongrel which had jumped into the wire run, and in the act of mating both had dropped dead. The owner at this moment was under the impression that the emotional crisis was the cause of death!

On arrival I found that the true story was that the gardener, observing the mating act about to take place, had turned the garden hose on the pair, with immediate death as a result. Since telephoning me, the gardener had entered the run to investigate and received a severe shock.

I proceeded to cut off the current at the switch box in the house. It appeared that a few months previously the owner had had wiring run from the house to the garage for lighting the latter, and the cable ran underground through the dog run. Subsequent investigation showed that rubber flex had been used for this purpose by the contractor and that a short had electrified an area of the ground when wetted.

It is surprising that more cases of electrocution do not occur, particularly in farm buildings, where the wiring is often of the flimsiest description. From the veterinary point of view it is important to remember to cut off the current before investigating such cases, or alternatively to wear rubber boots, coat and gloves, before approaching the "live" area.

REVIEWS

[**PHYSIOLOGY OF DOMESTIC ANIMALS.** By H. H. Dukes. 5th edition. Pub. by Comstock Publishing Coy. Inc., New York. Price 6 dollars.]

We have previously given a warm welcome to this book and it would appear that this welcome is fairly general, to judge by the rapidity with which new editions appear. The author and his collaborators do their best to keep the text up to date, while retaining the book at approximately the same size. On the whole the balance is well maintained, but it is questionable whether the section dealing with the brain could not be cut somewhat in a work essentially concerned with domestic animals and written to give the essence of present-day knowledge unhampered by masses of detail. If this were done it would be possible slightly to extend the book in other ways so that a better appreciation might be obtained of the importance of cellular physiology and enzyme action as a foundation to the functioning of tissues, organs and in fact the body as a whole. One would also like to see the author be a little bolder in his presentation of some of the recently acquired knowledge; for instance, the place of such substances as cytochrome and the vitamins in the scheme of things.

It will be recalled that the book is well furnished with tables of useful comparative data concerning the various species of domestic animals, and although many of the figures given in these tables indicate range there are still certain tables which would be much more useful if they were similarly amended. This applies particularly to tables giving the constitution of blood.

Despite these small blemishes the book still remains the most balanced textbook on physiology for veterinary students and graduates; it successfully gives a reasonable, composite picture and avoids the modern habit of cluttering up the main story with an immense amount of relevant but nevertheless confusing detail. Extensive footnotes are pleasantly absent. Useful references are given at the end of each chapter. We again strongly recommend this book to the profession.

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[**THE SECRETION OF MILK.** Espé D. Pp. ix—294, 65 figs., 35 tables. Ames, Iowa: Iowa State College Press. 2nd Edit., 1941 (8vo, $3·00).]

Starting with the phylogenetic development and anatomy of the udder, the book gives a very full review of the literature on the physiology of milk secretion. Various factors affecting the amount and composition of the milk are described. The advantages and disadvantages of hand and machine milking are compared, and the effect of various methods of "drying up" the cow on the development of mastitis are discussed; it is obvious that the author has much practical experience of dairy husbandry.

We still know comparatively little of the exact mechanism of milk secretion, but there is a very full and up-to-date account of the hormonal control of lactation; what is known of the nervous control of the udder is also described. The effect of the various food components on the yield and composition of the milk is discussed.

Much important but scattered information has been collected; the numerous tables and graphs and the 981 references with full titles are valuable features.

The book is based on a course of lectures intended to "focus the training received in anatomy, physiology and nutrition on problems dealing with the mammary gland." The importance of doing this is recognised by all those engaged in veterinary education, and the book is a valuable addition to the all-too-small literature on applied veterinary physiology.

ABSTRACTS

[THE RELATION OF FLIES (Musca domestica linnaeus) TO THE TRANSMISSION OF BOVINE MASTITIS. Ewing, H. E. (jun.). (1942.) *Amer. J. vet. Res.* **3**. 295-299.]

Three distinct experiments were carried out for the purposes of this investigation, the first to show the ability of laboratory-propagated *M. domestica* to carry *Str. agalactiae*, the second to show the availability of *Str. agalactiae* and pathogenic staphylococci on the external surface of the teat sphincter of mastitic cattle, and the third to show the occurrence of these organisms on *M. domestica* trapped in a dairy barn housing mastitis cattle.

The first two experiments revealed that it is possible for flies (*M. domestica*) to carry *Str. agalactiae* externally and internally, and that *Str. agalactiae* and pathogenic staphylococci were present on the external surfaces of the teat sphincters in nearly all of the mastitic animals examined.

The results of the third experiment suggested it was unlikely that the common house flies trapped in the dairy barn and studied in this investigation were important as agents for the transmission of bovine mastitis, as it was impossible to demonstrate either *Str. agalactiae* or pathogenic staphylococci in any of more than a thousand flies examined internally and externally. It was pointed out, however, that the hygienic conditions prevailing in the dairy barn used in this investigation were not generally comparable with conditions in the average dairy barn.

D. W. M.

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[EXPERIMENTS IN THE LIFE HISTORY OF THE CATTLE LUNG-WORM, *DICTYOCAULUS VIVIPARUS*. Porter, D. A., and Cauthen, G. E. (1942.) *Amer. J. vet. Res.* **3**. 395-400.]

The life history of this parasite is direct—the pre-parasitic stages of the worms developing in nature without the aid of an intermediate host. No details are, however, provided of this development by the authors, whose experiments were concerned with the administration of infective larvae to calves. A period of from 24 to 30 days generally elapsed after the infecting dose had been administered *per os* before larvae appeared in the faeces. As mature females measure from 6 to 8 cm., this indicates a very rapid rate of growth. Length of life of the parasites varied from just over a month in older calves, up to four months in a calf infected when six days old. (The calves were well fed, and this may have influenced the life history.)

Older calves were less easily infected and became less heavily infected than younger ones; evidence was obtained that considerable resistance was developed to later infection in animals infected previously.

Symptoms of disease were more marked in the younger calves and included shallow, laboured breathing, persistent coughing, diminished appetite, and in one case intermittent diarrhoea. The rate of growth of infected calves was impaired in comparison with uninfected calves. No evidence was detected of anaemia or significant change in the leucocytes of infected calves.

J. S. S.

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[RECOVERY OF *CLOSTRIDIUM SORDELLI* FROM CATTLE AND SHEEP. Vawter, L. R. (1942.) *Amer. J. vet. Res.* **3**. 382-385.]

Cl. sordelli was first isolated by Sordelli in 1922 from a case of gas-gangrene in a human and has, on odd occasions since, been proved a natural pathogen of cattle, sheep and horses, rarely alone, but more often in association with other anaerobes.

Vawter reports isolating this organism six times in 20 years in cattle and sheep in Nevada where certain soils are regarded as contaminated. He views it as one of the most pathogenic of the Clostridia and considers that it may occasionally play a role, hitherto unsuspected, in certain obscure infections of man and animals. Certain characteristics of the organism, *e.g.*, its rapid growth and agglutinability in young cultures with specific anti-sera, make it possible, he claims, to institute specific therapy early enough to be of practical value in the case of wound infections. In this article Vawter gives details of the main characters of this organism which grows easily in all liquid media accepted for this group. These are: gelatin: liquefied without blackening in 48 hours; coagulated serum: surface pitted, later gradual liquefaction with blackening in five to seven days; indol: positive; H_2S: positive; M.R.: positive; V.P.: negative; nitrates: not reduced; haemolysis (sheep R.B.C.s): positive; dextrose, laevulose, and lactose fermented (24 hours); galactose, lactose, saccharose, mannite, arabinose, xylose, inulin, salicin, dulcitol and glycerol not fermented (seven days); potent toxin produced (24 to 36 hours); thermolabile; destroyed 0·25 per cent. formalin; anacultures antigenic and produce specific agglutinins.

W. T. R.

QUESTIONS IN PARLIAMENT

Veterinary Education

Miss Ward asked the Secretary of State for Scotland whether the Loveday Committee has commenced any fresh investigations into the provision of veterinary education, as was foreshadowed in the last statement made by him on the subject?

Mr. Johnston: The Committee was asked by the Minister of Agriculture and Fisheries and myself to review in the light of the altered circumstances arising from the war and other causes, the recommendations made in its report published in 1938. In compliance with this request the Committee met again in February last and has since been actively engaged in pursuing its enquiries.

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Non-Pasteurised Milk

Mr. Leach asked the Parliamentary Secretary to the Ministry of Food whether he is aware that large numbers of consumers of milk detest pasteurised milk; that millions of children in this country have been healthily reared on untreated milk; that there is a considerable amount of evidence available to show that the recent increase in tuberculosis has nothing whatever to do with the milk supply; and whether, in view of these facts he will ensure to all milk consumers who desire to have fresh untreated milk, satisfactory supplies of the milk of their choice?

Mr. Mabane: As I indicated to the hon. Member for Consett (Mr. David Adams) on April 7th, my Noble Friend hopes shortly to be in a position to make an announcement of policy in this matter.

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Colonies, Stock-Breeding (Artificial Insemination)

Major Thornton-Kemsley asked the Secretary of State for the Colonies whether he is recommending artificial insemination of cattle on the lines adopted in Denmark and America to all Colonies where the importation of pure bred sires is restricted owing to war conditions; and whether any Government subsidies are given for this purpose?

Colonel Stanley: Artificial insemination has been practised for some years in Kenya and experiments are still being conducted in that Colony with a view to extending operations over wider areas than are at present possible under existing climatic conditions. Sir Frank Stockdale has proposed that artificial insemination should be undertaken in certain of the West Indian Colonies in order that the improvement of stock, particularly dairy herds, may be accelerated. So far as is known, no subsidies are given for artificial insemination, but facilities are provided by the Government in Kenya where the work is carried out by the veterinary staff.

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Dog Licences

Mr. R. Morgan asked the Financial Secretary to the Treasury the number of dogs for whom taxes were paid in 1942?

Mr. Assheton: The number of dog licences issued in England, Wales and Scotland during the year ended March 31st, 1942, was 2 569,922. Similar figures for the calendar year 1942 are not available.

Weekly Wisdom

The enquiring mind of the Greeks soon began to ask "why" rather than "how" and philosophy took precedence over observation. The Romans preferred studies of direct practical value; the territorial expansion and cultural degeneration of their empire exhausted the powers of scientific enquiry. The coming of Christianity abated curiosity about the physical universe, but stimulated benevolence, so that, in the early Middle Ages, medicine, in its care for the sick, became the progenitor of the sciences, and the history of medicine and biology became inextricably interwoven.—*Brit. Med. J.* 1942. March 14th. p.361 (from a review of a book entitled "The Development of the Sciences." Second Series. Edited by L. L. Woodruff. London: Oxford Univ. Press, 1941.)

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At the end of August there is a market for geese and it is usually better to dispose of them then rather than wait for the Christmas trade. If retained, cooked chat potatoes and any other vegetable matter will form their main diet. No meal is needed. Roman and White Chinese are good layers; the young birds attain weights from 8 to 12 lb., according to the time of hatching. The old weighty bird of 20 lb. and more is no longer wanted.

NOTES AND NEWS

The Editor will be glad to receive items of professional interest for inclusion in these columns.

Diary of Events

May 20th.—Meeting of the Ayrshire Division, N.V.M.A., at the Hannah Dairy Research Institute, Ayr, 2.30 p.m.

June 2nd.—Meeting of the Editorial Committee, N.V.M.A., at 36, Gordon Square, W.C.1, 2.30 p.m.

June 8th.—One-hundredth Annual General Meeting of the Royal College of Veterinary Surgeons, at the Royal Agricultural Society of England, 16, Bedford Square, 11 a.m.

June 8th.—Annual General Meeting of the Victoria Veterinary Benevolent Fund at 16, Bedford Square, immediately following the Annual General Meeting R.C.V.S.

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The Farm Livestock Emergency Service

Inclusion of Urban Areas

The Executive Committee has decided that the Farm Livestock Emergency Service shall extend to urban areas the same services as are now rendered to the rural areas, so that animals of economic value injured in air raids may be provided for in such areas.

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Gas-contaminated Stock

Should occasion arise for dealing with gas-contaminated livestock, the Executive Committee of the Farm Livestock Emergency Service desires to stress the importance of the maintenance of the closest possible liaison between the veterinary surgeon and the local authorities. More particularly in market towns, there are many points—such as dealing with contaminated stock not requiring slaughter, the destination of casualty carcases, etc.—to be settled in consultation with the Gas Officers and Food Contamination Officers of the local authority and the Ministry of Food officials, if the Service is to work smoothly under possibly heavy pressure. Therefore, in order that there may be no delay, in such circumstances, veterinary surgeons are asked to ensure that, for their part, everything possible is done to establish such co-operation with the local authorities and Ministry of Food officials concerned.

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N.A.R.P.A.C. Accident Scheme

As has been widely notified in the Press, the benefits of the N.A.R.P.A.C. Animal Register are being extended to provide that animals so registered, which are injured in street accidents, can be taken to a veterinary surgeon for full treatment at his usual fees, the cost of this treatment being borne by N.A.R.P.A.C. But for a last-minute refusal by the Paper Controller to release the paper for the purpose, an explanatory leaflet would have been issued to veterinary surgeons and owners of registered animals prior to the appearance of the Press announcement.

For some time it has been felt that an extended scheme would be of service and might reasonably be grafted on to the National Animal Registration Organisation by N.A.R.P.A.C.—an organisation with full veterinary representation—it being understood that the treatment of the injured animals should be given by veterinary surgeons and that the full fees of the veterinary surgeons should be paid. In effecting a registration the Committee is, in reality, entering into an annual undertaking with the owner of a dog or cat to defray the customary fees of veterinary surgeons attending street accident cases; the veterinary surgeon is asked, however, to notify the Director of Veterinary Services in those cases where he feels that prolonged treatment would be justifiable.

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PERSONAL

Marriage.—Lawson—Marshall.—At Balmuir, Bathgate, on April 28th, 1943, by the Rev. L. S. McLaughlan, John Lawson, M.R.C.V.S., D.V.S.M., Ministry of Agriculture and Fisheries, Shrewsbury, youngest son of the late James Lawson and of Mrs. Lawson, Mosslea, Bathgate, to Jemima Waddell (Jim), second daughter of Mr. and Mrs. T. Harvie Marshall, Balmuir, Bathgate.

R.C.V.S. OBITUARY

Nesling, Charles Crickmay, The Hermitage, Framlingham, Suffolk. Graduated London, December 20th, 1889. Died April 27th, 1943; aged 75 years.

Mr. C. C. Nesling, M.R.C.V.S.

Mr. Nesling, whose death we record with deep regret, for over fifty years had been valued in Mid-Suffolk agricultural circles as a veterinary surgeon. Born at the Lodge, Kenton, in 1868, he was educated at Framlingham College. Graduating from the London College, he entered upon country practice, and became a veterinary inspector under the Diseases of Animals Act. Retiring in 1929 from the position of honorary secretary of the Framlingham Livestock Association, one of the oldest organisations of its kind in the county, he was presented with a gold watch and illuminated address.

As a keen sportsman he took an active interest in the Easton Harriers, being hon. secretary for a number of years. A member of the Fidelity Lodge of Freemasons, he was trustee of the Mills' Charity and the Suffolk Naturalists' Society, his special interest being in the botanical section. He was also greatly interested in archaeology.

Mr. Nesling retired from practice in 1942, and had been in failing health since the death of his wife three years ago. He leaves four sons and a daughter.

There was a large assembly at the funeral service at Framlingham Parish Church, when among those present were Mr. W. Lisle Downie, M.R.C.V.S., and Mr. J. E. M. Spellman (representing the Eastern Counties Veterinary Medical Association).

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MINISTER ON "A NEW CIVILISATION OF THE COUNTRYSIDE"

In the course of his recent contribution to the series of Lunch-time Commentaries for City Workers at the Caxton Hall, Westminster, Mr. R. S. Hudson, Minister of Agriculture, said that he was now trying to work out a four-year plan for agriculture, including the harvest of 1947.

And what after that? A number of organisations and groups representing all political opinions, had issued reports on their ideas of what our post-war agricultural policy should be. Mr. Hudson said that obviously he could not discuss them now, but among these reports there was a unanimity that filled him with hope. But we could not expect to get a permanently vigorous and efficient agriculture at bargain basement prices. We should not create an easy, carefree life for all farmers, with an automatic profit. It would be a hard world for all of us, including farmers, for a long time after the war, but a man could not put his heart and soul into a job unless he had some hope and confidence in what he was doing. Unless the opportunity for that was there, a man's character would suffer as well as his farming.

No plan could create a vigorous inward life, but we could create the conditions in which such a life could flourish. We could say—"Here is the scope, the ground for confidence, the inspiration to personal endeavour." "And," Mr. Hudson concluded, "a new civilisation of the countryside is not just an idealist's dream. It is being fashoned now, and the farmers, their men and their womenfolk are making it."

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PEDIGREE LIVESTOCK

Mr. Alec Hobson, Secretary of the National Pig Breeders' Association, contributing to the recent correspondence on the above subject in *The Times*, says: "Breeders oversea—especially from the Continent—have often expressed amazement that Great Britain produces such high-quality stock without Government-aided breed societies. Every one of our societies is self-supporting; every one prepares its own breed 'standard,' insists on the integrity of its members, pays its own way, and does its own publicity and educational work. In short, these essentially British institutions, by voluntary effort, have created the goodwill which is in itself so valuable an asset to the nation. Members of the National Pig Breeders' Association have during the last 50 years exported tens of thousands of boars and sows. After 1918 it was largely to this country that continental countries turned to restock their pig herds. Single consignments of 300 pedigree pigs to Russia alone were frequent events. As one of a delegation representing my association I visited Denmark, Sweden, Germany, and Holland just before the present war to study the requirements of our clients. We returned to England more than ever convinced that Britain has a priceless asset in its sturdy livestock."

STUD GOAT SCHEME, 1943-44

This scheme, the purpose of which is to improve the standard of milch goats kept by smallholders, cottagers and others, will operate during the forthcoming breeding season, which will extend from September, 1943, till the end of February, 1944. The stud goats used must have been entered, or be eligible for entry, in the British Goat Society's Herd Book and must have been bred from milk producing stock. Owners of milch goats in the categories named above may obtain the services of approved stud goats at a fee not exceeding 5s. per service. The scheme will be administered by the British Goat Society, and stud goat owners should apply for particulars to the Secretary to the Society, The Cottage, Roydon, Diss, Norfolk.

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WARBLE FLY DRESSING: A WARNING

It has recently been reported that some heifers belonging to a farmer in Shropshire have been poisoned with nicotine through licking from the backs of other animals dressing used for killing the maggots of the warble fly. Stock owners who for the purpose of killing these maggots treat their infested cattle with the nicotine sulphate and lime dressing recommended by the Ministry, are warned that the dressing would poison animals who swallow it. It is not necessary to use more dressing than is needed to penetrate each cavity containing a warble fly maggot: to bathe the animals' backs with dressing is wasteful and may be dangerous. Care should be taken to see that no surplus liquid is left on the animals' backs after treatment.—*Ministry of Agriculture.*

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MINISTRY OF AGRICULTURE NEWS SERVICE

Kale Silage for Milk Production.—Marrow-stem kale, if properly grown and top-dressed so that it is really leafy, is a most valuable silage crop. Fed in addition to a maintenance ration, this silage is suitable as a sole food for milk production. At a recent silage competition in Yorkshire four out of eleven samples (mostly marrow-stem kale) gave an average of 15·2 per cent. of dry matter with a protein content of 16·7 per cent. The average of the eleven samples was 15·8 per cent. dry matter and 13·4 per cent. protein in the dry matter. With the high protein samples, 28 lb. would suffice for one gallon of milk, for the others the allowance would be 22 lb. of kale plus ½ lb. decorticated ground nut cake.

Kale being a sugary material, molasses is not essential when making it into silage, though its addition may be a valuable insurance when a young and very leafy crop is being ensiled. Chopping is essential. As the crop does not need to heat up in the manner essential to grass silage, the silo can be filled in rapidly. The quick settling exerts considerable side thrust on the silo; it is, therefore, advisable to counteract this with the addition of an extra band. Yields of 20 tons per acre are easily obtained and if the land is given a dressing of farmyard manure and well top-dressed with nitrogen yields will rise to 30 tons or more.

The crop can be cut in October and it can be harvested over an extended period without detracting from the feed value. If the crop is removed early the land can, if desired, be made available for a winter cereal. Early sowing on a fine moist tilth is the best way of safeguarding the crop from attack by "fly."

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Dairy Farm Equipment.—Replying to a Parliamentary question, Mr. R. S. Hudson said that a scheme is nearing completion that will enable dairy farmers to obtain towels and udder cloths without surrendering personal clothing coupons. The Minister further said that production of farm dairying machinery in 1943 is expected to be considerably greater than in 1942 and should be sufficient to meet farmers' needs.

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De-horning Cattle.—Mr. Hudson's appeal to farmers to de-horn their cattle has the backing of the N.F.U. De-horning means that beasts can be kept thicker in the yards, take less trough room and eat more healthily and profitably. The best time for de-horning is when calves are under five days old. Members are asked to consider treating all non-pedigree male calves (except those reared for service). The process is painless when carried out correctly with caustic potash. It is important that a calf should be kept away from the dam until the potash has formed a dry, black covering on the horn bud, which occurs about one or two hours after the operation. The entire removal of horns from partly or fully grown animals is prohibited unless the animal is wholly anaesthetised throughout the operation.

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Dehydrated Supplies of New Zealand Mutton.—Dehydration of meat in New Zealand started only a year ago, but already this Dominion has contracted to supply 2,500 tons of dried mutton during the next twelve months. 2,500 tons of dried mutton are equal to 12,500 tons of boned meat, every particle of which can be consumed. The first extensive dehydration plant was completed in March; it can turn out 5,000 tons of dried meat annually. Another commercial plant at Auckland, the largest of its type in existence, is now undergoing trials.

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Geese Raised on Grass.—Geese are ideal birds for war-time conditions. They are the only domestic birds capable of subsisting for long periods entirely on grass and even fattening on it. From the fifth week to within three months of Christmas goslings can be raised and fattened on a grass diet. Some may require finishing on the stubbles after harvest. The best period for hatching is at the end of April. This ensures the birds being ready to forage for themselves by the end of May when grass is plentiful. Later hatchings can be successful or young goslings can be bought. Small lots of birds can be raised by good conditioned, large bodied hens, one hen covering four eggs. Incubation period is from 28 to 30 days. During the first month the young goslings require boiled mashed potatoes with a small quantity of meal, in addition to any grass they may be inclined to eat. As they develop the food can be reduced and by the end of a month they will be foraging for all the food they require.

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COMMERCIAL CATTLE: NEED FOR TYPE IMPROVEMENT

"As yet there are few signs of that improvement in the general type of our commercial cattle which so many desire to see," observes *The Farmer and Stock-Breeder* in a recent issue, and proceeds: "The York Association of Shorthorn Breeders has done well to call attention to the necessity for some leadership in this matter. It complains that there is no general agreement as to the type of bull which is officially approved; it thinks there should be a greater number of premium bulls in use, and it rightly condemns the short-sighted policy of some farmers in indiscriminately crossing breeds of cattle in a way which can only depress still further the standard of cattle seen in our markets.

"The Minister himself has urged the need for livestock improvement and has apparently left to the industry the manner of effecting it. We are doubtful whether the appeal to the W.A.E.C.s will in itself produce results. A lead from some authoritative body, carried out with energy in each county, could do much, by the deprecation of indiscriminate breeding, to create a 'better stock' sense among the increased number of those now engaged in dairy farming. Once the right atmosphere is created positive action for raising the standard should be easy.

"Breed societies have done excellent work in extending interest in their own particular cattle; the need seems to be for them to combine to advocate better cattle of all breeds, not of one breed alone. It seems the sort of task that the National Cattle Breeders' Association should do. That body is one of expert breeders, but it would require official backing and raising in status to something approaching a permanent committee working with the Ministry, with means of instruction and powers of practical encouragement. The various livestock activities of the Ministry need a new focusing on to the definite task which Mr. Hudson has so clearly indicated lies before the industry. Our commercial herds must be improved to stand up to present and post-war needs and our breeding policy must be attacked from the national angle—and with vigour."

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SOIL FERTILITY IN SOUTHERN RHODESIA

"The preservation of fertility of soil in Southern Rhodesia is receiving the special attention of the Food Production Committee who are encouraging the adoption of various methods," states *The Farmers' Weekly*, which continues: "Statistics show that during the last five years there has been a marked advance in the planting of restorative crops, especially on land formerly devoted to maize.

The Food Production Committee, Natural Resources Board and Department of Agriculture are concentrating on the preservation of soil fertility as well as soil conservation. Although these subjects are not yet receiving the attention deserved, except among progressive farmers, the last five years' progress is noteworthy."

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In view of the continued drive for increased milk production, the N.F.U. and Chamber of Agriculture for Scotland's War Committee have asked the Department of Agriculture to consider the possibility of a higher priority being granted in the matter of the release of materials for the repair or erection of buildings designed to accommodate stock on dairy farms. This, they believe, would help farmers, who would otherwise be precluded, by lack of the necessary housing facilities, from increasing milk production.

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In the past the farmer usually has been indifferent to and not infrequently contemptuous of colleges and "professors." Only a few of the more adventurous sought the specialist's advice. On the other hand the colleges seemed to work in a mist of incomprehensible "science," far removed from the day-to-day handling of practical farming problems. In their turn the colleges taught more scientists who never got out into the great world of affairs. So the "professors" stayed in their misty towers and the farmers at the cow's tail and met all too seldom. One of the best things which has happened to farming as a result of the war has been the meeting between scientist and farmer. They have both learned to appreciate each other.—*Farmers' Weekly.*

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The value of agricultural shows in war-time as a means of maintaining the popularity of the Clydesdale and other breeds of heavy horses was emphasised at the annual meeting of the Cumberland Agricultural Society, when it was proposed to hold an autumn show again this year. The Clydesdales at last year's show aroused great interest.

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Victor, an American horse which served in France during the last war, has been destroyed at Blackadon Farm, Duloe, Cornwall, at the age of 32 years.

CORRESPONDENCE

Letters to the Editor should reach the Office not later than by the first post on Monday morning for insertion in following Saturday's issue.

The views expressed in letters addressed to the Editor represent the personal views of the writer only and must not be taken as expressing the opinion or having received the approval of the N.V.M.A.

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"DIAGNOSIS AND TREATMENT OF PYOMETRA"

Sir,—Some months ago we published a paper in the *Record* on the "Diagnosis and Treatment of Pyometra" and there was considerable criticism following its publication, several points being held in doubt. We recorded a case of pyometra in which fremitus was most certainly present despite the doubts of certain readers, and we note that a similar case has been recorded by Mr. Pickering, of Hexham. We believe the phenomenon of fremitus to be purely physical, depending essentially on the amount of blood flowing through the artery, which is in turn dependent on the diameter of the artery. If an ordinary piece of rubber tubing corresponding roughly in diameter to the uterine artery during late pregnancy is connected to a pressure tap, water allowed to flow through and the tube then lightly pinched between finger and thumb, an identical sensation to that of fremitus is felt. If the tap is now gradually turned off the fremitus fades and finally ceases, although water is still running freely from the tube. If this is true then any conditions involving a greatly increased blood flow to the uterus would produce fremitus. The only conditions likely to do this are either pregnancy or pyometra following pregnancy, in which the artery had not sufficient time to atrophy.

Another point which caused some consternation was the method we suggested for distinguishing between a certain type of pyometra, *e.g.*, the thin-walled 3-3½ month size, and pregnancy, when examining per rectum. This consisted of picking up a fold of uterus and allowing it to slip through the fingers when the foetal membranes can be felt slipping away before the uterine wall. In criticising this point it was stated that the procedure at three months was practically impossible. It may interest readers to know that not only is this method used as a means of distinction between pyometra and pregnancy, but also in the diagnosis of pregnancy from the sixth week onwards, by progressive veterinary surgeons both in this country and in America. (Personal communication.) Anyone with a little experience of rectal examinations can pick up a fold of uterus at any stage of early pregnancy after the first few weeks without much difficulty and provided it is done carefully no harm will result.

Mr. Pickering reports that one of the animals treated by him had the uterus sealed off by some form of membrane or adhesion similar to that recorded by us in a heifer. This latter animal commenced to lactate following repeated injection of stilboestrol. J. G. Murray, of Newport, records a similar case of lactation following injection of this product.

In conclusion we would like to endorse the opinion of J. B. Makinson, Jean Makinson and G. S. Powley expressed in their letter to the *Record* of March 13th, that criticism by experts should not deter future publication by younger members of the profession.

Yours faithfully,

D. N. Spriggs.
L. E. A. Rowson.

The University,
Reading.
April 24th, 1943.

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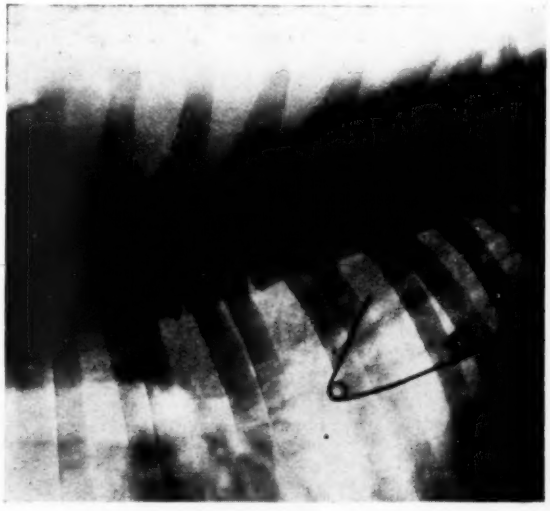
OPEN "SAFETY" PIN IN OESOPHAGUS: RADIOGRAPHICAL AID

Sir,—On enquiry we learn from Major H. Kirk, M.R.C.V.S., that the Alsatian referred to in his clinical communication to *The Veterinary Record* of April 3rd, 1943, was a case sent by him to the Royal Veterinary College, London, two months ago. Some further details of this case may be of interest.

The animal appeared in fair bodily condition and without signs of respiratory disorder. According to the owner, who brought a radiograph taken by Major Kirk showing a safety pin in the upper posterior part of the thorax, the dog was believed to have swallowed the pin about three weeks previously. Some listlessness only had been shown for two weeks.



The dog was admitted and anaesthetised with nembutal intravenously, the full dose for body weight being given. The chest was radiographed laterally and the "safety" pin found to be occupying a position roughly the same as that shown by Major Kirk's film, *i.e.*, the upper posterior thorax with the clip end about 1 cm. from the diaphragm. In the absence of respiratory symptoms the foreign body was considered to be oesophageal. Per os an illuminated and well lubricated endoscope was slid slowly down the oesophagus until the end of the pin came into view. A length of thin metal rod looped at one end was passed along the tube and the pin hooked and drawn within the endoscope. The diagram and radiograph print may help to illustrate the case.

Had the pin been lying in the reverse direction extraction would probably have been best attempted by passing the endoscope from the stomach after gastrotomy.

Yours faithfully,
GORDON C. KNIGHT.
SIDNEY W. DOUGLAS.

Royal Veterinary College and Hospital,
Camden Town,
London, N.W.1.
April 7th, 1943.

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REGISTER OF VETERINARY SURGEONS

Sir,—Will you please allow me space for an explanation about the issue of copies of the Register for 1943. Owing to delays in transport supplies are received very slowly, but copies will be sent when available to all members who apply for them.

A regrettable error has occurred in preparing the copy for the 1943 edition, for the name of Mr. James Morrison Taylor, M.R.C.V.S., of Cathkin, Rutherglen (graduated Glasgow, July, 1942), was inadvertently omitted. My apologies have been sent to Mr. Taylor.

Yours faithfully,
FRED BULLOCK,
Registrar.

Royal College of Veterinary Surgeons,
18, Victoria Avenue,
Harrogate.
May 5th, 1943.

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VETERINARY SURGEONS ACTS (AMENDMENT) BILL

Sir,—The fact that Council of the R.C.V.S. should have seen fit to sponsor such a sorry affair as the Veterinary Surgeons Act (Amendment) Bill appears to me to give food for much serious thought. Elected to safeguard the interests of the profession in all matters pertaining thereunto, it is difficult to see how they can reconcile their sponsorship of this virtual piece of sabotage with their duty to the members whose views they are supposed to represent.

A careful study of the Bill fails to reveal a single redeeming feature. Had it been framed by the quacks themselves it could not have better suited their requirements. Apart from everything else, its effect on the student outlook must be disastrous. If this is what Council consider to be a contribution to the future well-being of the profession, then the outlook is black indeed.

Yours faithfully,
F. J. KINGHORN.

18, Woodcroft Avenue,
Broomhill,
Glasgow.
May 3rd, 1943.

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Sir,—The foreigner has no right to interfere with the internal organisation of English veterinary surgeons, but the intention to put quacks on an official subsidiary Register of the Royal College is not purely an internal question for the veterinarians of Great Britain.

At the annual general meeting of the N.V.M.A. (September 24th, 1942) I had the honour to say: "Veterinary surgeons in spite of geographical and national differences comprise one large family throughout the world; they have the same ambitions, endeavours, duties and troubles."

In Poland we also had many troubles with quacks, which we fought against with all our legitimate forces. For over forty years we struggled to be on a level with other academic professions and we have won at last. Now we have no intention to resign from our conquest for the benefit of the unqualified. As an academic profession we cannot afford to support and to patronise the quack, not only from the point of view of protecting our financial affairs, but for the reputation of our science and the dignity of our diplomas. The conditions of veterinary practice are especially hard and unthankful. The veterinary practitioner derives his livelihood not only from grave cases but also from mild cases of animal disease. The non-qualified persons cure only the latter. We know well that the slight temporary cases of disease recover often even without treatment whereas in serious cases the mortality percentage is high. For his good professional reputation the veterinary surgeon is largely dependent on the low percentage of mortality among his patients. The ordinary client does not distinguish the temporary, slight and easily curable case from the difficult, "killing" animal diseases. For him that practitioner—be he qualified or unqualified—is the better who has healed his animal.

It is our duty to secure for our veterinary youth a clear future with the highest reputation for veterinary practice and without the impudent concurrence of non-qualified persons. Our future colleagues will have many other troubles in the maintenance of their arduous existence. We should demand a monopoly of veterinary practice for the qualified M.R.C.V.S. The legislative story of professional stimulation through the toleration of quacks is obsolete. The veterinary profession does not need such doping from the bunglers. Our professional stimuli are: the progress of veterinary science, precision of knowledge, the honour of the profession and the affection and esteem in which we hold it.

After registration, all restrictions of privileges for the quacks will gradually be removed and their demands will increase: "l'appétit vient en mangeant!" The voluntary admission of the quacks to the Register will legalise their existence and they will hasten to pay the annual subscription, whatever its amount.

After this war Great Britain will have a big influence in the allied countries. Polish veterinary surgeons will be eager to imitate the hitherto excellent organisation of English veterinary surgeons. The registration of the quacks in Great Britain, however, may create a precedent for an analogous proceeding in Poland, but this copy would be noxious and the Polish veterinary surgeons would not be grateful to their English colleagues for the dangerous experiment of an official alliance with the quacks.

Yours faithfully,
STANISLAW RUNGE.

26, Woodside,
Wimbledon, S.W.19.
April 12th, 1943.

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THE FUTURE OF THE PROFESSION

Sir,—Some 18 months ago you published a letter from me, to which you were good enough to accord the honour of editorial comment. A good deal of criticism, much of it ludicrous in its ineptitude was levelled at me; I also received a considerable volume of correspondence expressing agreement with the views I ventured to express. Twelve months later appeared in quick succession the Scott and Uthwatt Reports. Some of the conditions which I foreshadowed as among those with which the veterinary profession would have to contend were embodied almost word for word as definite recommendations in the former of these Reports, and legislation is now being prepared based on them. So perhaps the time is now ripe to ask whether the profession, and more particularly those to whom we should look for leadership, have moved at all from their faintly derisive attitude to any new alignment. In this connection it seems to me that a drastic remoulding of the governance of the profession is to be desired. I have recently enquired of a number of colleagues the name of the President of the R.C.V.S.—and *no one* was able to tell me. Surely this deplorable lack of interest would not obtain were that body a live one elected, like the Council of the N.V.M.A., on a regional basis. I can find nothing in the Charter of 1844, nor in the Supplemental Charters of 1876, 1879, 1883, 1892, 1914, 1923 or 1932 prohibiting election from being made on this basis. The first step, as I see it, would be to make membership of the N.V.M.A. obligatory on graduation, and elect members of Council, R.C.V.S., from the N.V.M.A. Divisions. This would give the Council a much closer bond with the rank and file of the profession—on whose ability and ethical sense the reputation of the profession ultimately rests—and prevent its becoming out of touch with current thought and events. The only alternative I can see to the reform I have outlined—a preferable one but perhaps somewhat drastic—if the profession is to guide its destiny and not be controlled by it, is for a further Supplemental Charter to be sought and implemented transferring the powers and duties of the R.C.V.S. to the N.V.M.A.

Yours faithfully.
PAUL CROSFIELD.

Chipping Norton.
Oxon.
April 28th, 1943.

ADVERTISER'S ANNOUNCEMENT

Supplies of Phenamidine (formerly known as M & B 760) for the treatment of Bovine Redwater are now available from Messrs. Pharmaceutical Specialities (May & Baker) Ltd., of Dagenham. This product is an aromatic diamidine of the formula 4:4'-diamidinodiphenylether di-(*B*-hydroxyethanesulphonate). It is available in single ampoules of 10 c.c. of a 40 per cent. aqueous solution and in boxes of six ampoules. It is claimed that the use of the drug has been remarkably free from any signs of intolerance or toxic reaction, and appears to be well tolerated locally on injection. Further details are available to veterinary surgeons on request to the makers.